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PERSONALITY CORRELATES OF ACADEMIC ACHIEVEMENT AND PROFESSIONAL ATTITUDES OF STUDENTS IN TEACHER EDUCATION.

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NONACADEMIC FACTORS INFLUENCING THE SELECTION OF CANDIDATES FOR TEACHER EDUCATION WERE ISOLATED AND EVALUATED. THE THEORETICAL BASIS FOR THIS STUDY WAS DRAWN FROM DAVID P. AUSUBEL'S FORMULATION OF THE RELATIONSHIP BETWEEN EGO-DEVELOPMENT AND LEARNING. SAMPLE EDUCATIONAL PSYCHOLOGY CLASSES WERE ADMINISTERED (1) A REVISION OF AUSUBEL'S PARENT ATTITUDE RATING SCALE, (2) THE MINNESOTA MULTIPHASIC PERSONALITY INVENTORY, (3) MINNESOTA TEACHER ATTITUDE INVENTORY (MTAI), (4) THE STUDENT EDUCATIONAL ATTITUDE SCALE, (5) THE CALIFORNIA F SCALE, AND (6) THE STUDENT BELIEF RATING SCALE. THE TEACHER OF EACH CLASS WAS ADMINISTERED THE MTAI ALONG WITH HIS CLASS. A STUDENT DATA SHEET AND THE MTAI WERE ADMINISTERED IN POST-TEST DESIGN. PRODUCT-MOMENT CORRELATIONS WERE REPORTED FOR MOST ANALYSES. MALE COLLEGE OVER-ACHIEVERS APPEARED TO BE MOTIVATED BY THE NECESSITY TO REDUCE THE DISSONANCE BETWEEN A SOMEWHAT INFANTILE, OMNIPOTENT EGO STRUCTURE AND THEIR PERFORMANCE IN THE REAL WORLD. ALSO, MALE STUDENTS WITH HIGHER SATELLIZATION SCORES APPEARED TO SCORE LOWER ON AFFILIATION-ORIENTED BELIEFS. (RS)

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Cooperative Research Project S-142

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PROBLEM

It would be hard to imagine a group of college students with more of a potential influence on society than those preparing to teach in our public schools. Not only will they influence their own children, but class after class of the progeny of their fellow citizens.

The impact of these teachers-in-training will be felt in two major areas. While their primary effort may be directed toward the learning and teaching of knowledge and understanding, an equally strong influence may be exerted by the attitudes and values that they enact. This would seem especially true of their attitudes toward children, toward education, and toward themselves.

At the present time, most of the selection of candidates for teacher education is done on the basis of academic record only. The present investigation pursues the possibility that there may be potent non-academic factors that must be dealt with in addition.

The theoretical basis for this investigation is drawn from David P. Ausubel's formulation of the relationship between ego-development and learning (1949). He describes the "satellizer" as a person who, because he has been emotionally accepted and valued for himself, has accomplished normal ego-devaluation and becomes volitionally dependent upon his parents.

Contrasted to the satellizer is the "incorporator" who has responded to parental rejection and/or extrinsic over-evaluation by retaining his grandiose and omnipotent infantile ego-structure.

For satellizers, the method of learning (especially of new values) occurs

largely through a process of intellectual satellization in which the acceptance of the new material is secondary to the attitude of emotional subordination to the teacher.

The incorporator acquires new material on the basis of objective and ego-prestige factors. He uses learning to reduce the dissonance between his exalted self image and his behavior in the objective world.

Ausubel believes that each person is some place on a continuum between complete satellization and complete incorporation and that while the incorporator may be expected to over-achieve in his learning, he pays a great emotional price in personal insecurity and anxiety.

Ausubel also implies strongly that the two "types" must be handled differently in the classroom in order to achieve maximum learning at optimal anxiety levels.

In a later study of fourth and fifth graders, Ausubel and his associates (1954) established significant relationships between several independent measures of intellectual satellization and a Parent Attitude Rating Scale (PAS) measuring pupils' perception of their own acceptability and intrinsic worth to their parents.

A second group of studies that figure prominently in this project are those done by McClelland and Atkinson and their students (Atkinson, 1958; Atkinson, Bastian, Earl, & Litwin, 1960; Atkinson & Litwin, 1960; McClelland & Atkinson, 1953). They have discovered two major motivational syndromes which they call achievement and affiliation.

People whose motivation is chiefly achievement-centered tend to (1) believe in an orderly universe, (2) trust reason to solve problems, (3) deny themselves immediate pleasures, (4) feel that their parents were never quite satisfied with their performance, (5) believe that everyone must prove his worth in life

by what he accomplishes, (6) trust their conscience to be a good judge of right and wrong, and (7) believe that a person working alone can solve a problem better than a committee.

Conversely, persons whose motivation is chiefly affiliative are apt to (1) believe that there is little order in the universe, (2) trust hunches and feelings rather than reason, (3) accept their own impulses to enjoy immediate pleasure, (4) feel that their parents approve of most of their actions, (5) believe that social acceptance gives the major value to their lives, (6) believe that morals are socially determined and not static, (7) see luck and chance as figuring more strongly in their fortunes than work and reason, and (8) believe that committees can solve problems more efficiently than persons working alone.

These two groups of studies (Ausubel's and Atkinson's) seem so similar that one immediately wonders whether Atkinson's achievement-motivated student is also Ausubel's incorporator.

A third series of studies that is basic to our research are being carried out at the University of Michigan by Isaacson, McKeachie, and Milholland (Isaacson, 1964; Isaacson, McKeachie, & Milholland, 1963; McKeachie, 1961). Here the whole student-instructor-method interaction is being explored. While several of these studies are still in process, the available results show that the personality syndrome of the student, the personal characteristics of the instructor, and the mechanics of methodology are all influential factors in the teaching-learning process.

In addition, these studies imply the hope that we soon may be able to place a student in the instructor-methodological milieu that interacts most productively with his own particular personality syndrome.

In 1963 Ofchus and Gnagey published the results of a study which concerned the shift of professional attitudes of students in teacher education. A study

of 71 college women failed to support their main hypothesis that a student's attitude toward teaching children would shift toward the position of her instructor. Our present belief is that the degree of satellization variable may have obscured this main effect.

HYPOTHESES

Using the above research as a springboard, the following hypotheses were derived.

1. A negative relationship exists between one's degree of personality satellization and the amount of anxiety he manifests.

   This hypothesis is based on a key postulate of Ausubel's theory. Since the satellizer has less need to "prove himself", his anxiety level should be much lower than that of the incorporator who must constantly achieve success to reduce the dissonance between his infantile, omnipotent ego structure and his performance in the objective world.

2. Academic over-achievers will have lower personality satellization scores than academic under-achievers.

   Ausubel predicts this directly since the satellizers don't need to achieve academic success for self-esteem while the incorporators do.

3. A positive relationship exists between one's degree of personality satellization and his tendency to shift his attitudes about public school students in the direction of the instructor's score.

   Ausubel contends that the satellizer forms an emotional attachment to the instructor that is not formed by the incorporator. Since attitudes are learned by identification and imitation, it follows that the satellizer should more often shift his attitudes toward the instructor than should

the incorporator.

4. A positive relationship exists between one's degree of personality satellization and his attitudes toward teaching public school students.

If the satellizer does approach new situations with less anxiety than the incorporator, his anticipation of dealing with public school students should constitute much less of a threat to his ego. He should, therefore, hold fewer defensive negative attitudes toward teaching students than would be true of the incorporator.

5. A positive relationship exists between one's degree of personality satellization and his attitude toward professional education.

Since the satellizer feels more accepted and satisfied with his personal status, he should less often find it necessary to identify with high prestige (academic) courses. The incorporator, who desperately needs to "prove himself", can be expected to extoll the virtues of academic courses to serve his ego-prestige needs.

6. A negative relationship exists between one's degree of personality satellization and his tendency to hold authoritarian attitudes.

Since the authoritarian syndrome is thought to be a complex defense against anxiety (Adorno, et.al., 1950), it follows that the satellizer, who feels a degree of parental acceptance, should less often need to adopt such attitudes as compared to the incorporator who experiences more anxiety about his ego prestige.

7. A positive relationship exists between one's degree of personality satellization and his tendency to hold affiliative beliefs.

Since a main characteristic of the satellizer is his feeling of

parental approval, the appearance of this characteristic in Atkinson's list of beliefs held by persons high in need-affiliation makes our prediction seem logical. The entire list of beliefs seem characteristic of persons much less rigid, defensive, and anxiety-laden than incorporators.

8. A negative relationship exists between one's degree of personality satellization and his tendency to hold achievement-oriented beliefs.

A great number of the beliefs held by Atkinson's subjects rating high in need-achievement indicated lack of parental acceptance, need to prove one's worth, and rigid, defense-orientation. It follows that the relatively secure satellizer should less often ascribe to such beliefs than those one would expect of the rejected, anxiety-laden incorporator.

PROCEDURE

As indicated by the title, the major focus of the study was on students in teacher education. In order to preserve the "reality" of our findings, we determined to use intact classes which had been assigned in the usual way. Sections of Educational Psychology were selected because the objectives were both academic and attitudinal in nature, and because a substantial portion of the student body is required to pass this course.

Six such classes were selected (N = 192), four from I.S.U. and two from State University College at Geneseo, New York. Two were taught by the same female instructor at 10:00 a.m. and at 2:00 p.m. Two were taught by one male instructor at 8:00 a.m. and at 5:00 p.m., and two were taught by another male instructor at 9:00 a.m. and 2:00 p.m. This selection provided for a more representative sampling of class times and gave us some control over the teacher variable.

The I.S.U. Sample. Data from a student information sheet (Table 1) revealed that our I.S.U. sample (N = 139) had the following characteristics: 44 per cent of the sample were men while 56 per cent were women; ages ranged from 18 to 24 with a mean of 20 years (See Appendix, p. 33).

Seven per cent were freshmen, 61 per cent were sophomores, 28 per cent were juniors, and 3 per cent were seniors. There was one graduate student in the sample.

The mean percentile rank on the American College Testing Program Examination (ACT) was 64 (See Appendix, p. 22).

Table II summarizes the data on the educational background of the parents of our sample students. Thirteen per cent of the students' mothers had quit school after the eighth grade, while 11 per cent had continued to a point

between the 9th and 11th grades. Fifty-two per cent were high school graduates while 17 per cent had taken courses at the college level short of graduation. Seven per cent of the mothers had obtained college degrees.

Twenty-~~five~~ six per cent of the I.S.U. students' fathers had quit school after the eighth grade, while ~~11~~ 12 per cent had gone on to some point between 9th and 11th grade. Forty per cent of the fathers were high school graduates, while 9 per cent had taken some college work short of graduation. Thirteen per cent had obtained a college degree (See Appendix, p. 23).

Table III summarizes the occupational level of the students' fathers. Forty-eight per cent held professional positions, 37 per cent were skilled workers, 10 per cent were semi-skilled, while 5 per cent were classified as unskilled (See Appendix, p. 24).

Fifty-four per cent of the students' mothers were housewives, while the remainder listed another occupation. Thirty-two per cent held professional positions, and 7 per cent did skilled work. Less than one per cent were employed at semi-skilled jobs, while three per cent were classified as unskilled laborers.

The Geneseo Sample. Characteristics of the Geneseo sample (N = 53) were somewhat different from those of the I.S.U. sample as indicated in Table I. Twenty-eight per cent were men while 72 per cent were women. Ages ranged from 19 to 42 with a mean of 22.

While there were no freshmen in the sample, 10 per cent were sophomores, 69 per cent were juniors, 12 per cent were seniors, and 9 per cent were graduate students.

Their mean percentile rank ~~of~~ on the School and College Abilities Test (SCAT) was 57 (See Appendix, p. 22).

Forty-nine per cent of the Geneseo sample were preparing to be elementary

teachers, while only 51 per cent planned to teach in high school.

As presented in Table II, 7 per cent of the Geneseo students' mothers had quit school after the eighth grade, while 26 per cent had dropped out at some point between 9th and 11th grade. While 51 per cent of the mothers graduated from high school, only 2 per cent took some college work short of a degree. Fourteen per cent of the mothers had obtained some college degree.

Twenty-five per cent of the fathers of Geneseo students quit school at the end of grade 8, while 18 per cent dropped out between grades 9 and 11. While 30 per cent of the fathers terminated their education after high school, 9 per cent had some college work short of graduation. There was 18 per cent of the Geneseo fathers who had obtained a college degree (See Appendix, p. 23).

Table III summarizes the occupational level of the Geneseo students' fathers. There were 26 per cent who held professional positions, 50 per cent were skilled laborers, 13 per cent who were semi-skilled, and 11 per cent who were classified as unskilled laborers (See Appendix, p. 24).

Thirty-nine per cent of the mothers of Geneseo students listed "housewife" as their only occupation. There were 18 per cent who held professional positions and 27 per cent who were skilled workers. While no mother was classified as being semi-skilled, 16 per cent worked in an unskilled capacity.

Measurement. A revision of Ausubel's (1954) Parent Attitude Rating Scale (PAS) was used as an indirect measure of degree of satellization (See Appendix, pp. 31-32).

Half of this scale measures a student's perception of his own acceptability to his parents while the second half measures his perception of his parents' intrinsic valuation of him.

Parental acceptance was measured by 18 statements characterizing parent-

child relationships in the home. Every student evaluated each statement for its congruence to his own experience. A five-point scale was employed with a "5" indicating "always true in my home" and a "1" indicating "never true in my home."

Statements such as "When I had something to say, my parents listened" were scored as positive. Items such as "My parents acted as if I were in their way" were scored as negative.

Intrinsic valuation was measured on the same type of device as parental acceptance. There were also 18 items comprising this half of the instrument.

Statements such as, "No matter how I did things, I knew my parents liked me," were scored positive. Items such as, "My parents had already decided what I was going to be," were scored negative.

In an earlier pilot study, coefficients of stability of r = .876 and r = .804 were obtained for the first and second halves respectively of the PAS using an Educational Psychology class (N = 35) of the type sampled in the study.

The AT Scale of the Minnesota Multiphasic Personality Inventory (Psychological Corporation, 1951) was employed to measure manifest anxiety.

To locate over- and under-achievers, scores on the American College Test (ACT) were correlated with grade point averages (GPA) of a group of students not in the study (N = 1084). Regression equations (one for men and one for women) using this data were used to predict GPA's for all subjects. Students whose actual GPA was greater than their predicted GPA by at least one standard error of estimate were called "over-achievers."

Students whose actual GPA was less than their predicted GPA by at least one standard error of estimate were called "under-achievers."

All other students were called "normal achievers."

Positive attitudes toward students and teaching were measured with the

Minnesota Teacher Attitude Inventory (Cook, et.al., 1951).

Attitude shift scores were computed by noting the amount and direction of the difference between a "pre" and "post" administration of the MTAI in relation to the MTAI score of the instructor. Changes that indicated the students' final position to be closer to the instructor's were classed positive shifts. Cases in which students' final MTAI's were farther from the instructor's score than initially were said to shift in a negative direction.

Students' attitudes about the value of professional education curriculum compared to the academic program was measured by the Student Educational Attitude Scale (SEAS). This consisted of 18 statements about the merits of professional education personnel and curricula as compared to those considered strictly academic or "subject matter" in nature. The students rated each statement on a 5-point scale of congruence with their own opinion (See Appendix, p. 29).

Statements such as, "Education courses are extremely valuable for future teachers," were scored as positive. Items such as, "Teacher education should be controlled by subject-matter specialists," were scored as negative. A coefficient of stability of r = .717 was found for the SEAS in our pilot study group (N = 35).

Authoritarian attitudes were measured using the California F Scale (Adorno, 1950). Both achievement and affiliation orientation were measured by the Student Belief Rating Scale(SBRS). This scale consisted of twelve statements of belief based on Atkinson's findings (1958).

Statements such as, "We live in an orderly universe," were scored as achievement-oriented. Items such as, " A committee can usually solve a problem more effectively than a single person", were scored as affiliation-oriented. Each statement was rated on a 5-point scale of congruence with students' own belief. A coefficient of stability for this scale was found to be r = .810 using the same group on which the PAS was measured (See Appendix, p. 30).

Method. All sample classes were administered all of the measuring devices during the first two weeks of the fall semester of 1964. (The teacher of each class was administered the initial MTAI with his class.) A student data sheet and the MTAT were administered during the final two weeks of that semester.

The suggested standard procedures were used for all the published devices. A standard set of instructions was read before the administration of the other devices.

RESULTS AND ANALYSIS

Table IV summarizes the data for the main effects. Product-moment correlations are reported in all cases unless other-wise specified. The level of confidence of each correlation coefficient was determined by the use of the t-test using the formula: $t = \frac{r\sqrt{N-2}}{\sqrt{1-r^2}}$. The tabled significance level was then halved since all hypotheses are directional (See Appendix, p. 25).

Hypothesis 1. As predicted, a negative correlation (r = -.29) was found between the PAS (satellization) and AT (anxiety) scores of men in the I.S.U. sample. While this relationship was significant at better than the .025 level of confidence (t = 2.16), no such relationship was found for I.S.U. women (See p. 25).

A similar relationship was apparent in the Geneseo sample where correlation was r = -.62 for the 15 men. This relationship was significant at better than the .01 level of confidence (t = 2.75). As in the I.S.U. sample, no relationship was found between the PAS and AT scores of the 38 Geneseo women (r = -.006).

Hypothesis 2. Of our original sample of 139 I.S.U. students, ACT scores were available for only 39 men and 60 women. Grade point averages were computed on the basis of courses completed at the end of the preceding semester.

A correlation of r = .40 was found between the ACT and GPA scores of 367 male I.S.U. students not in the study. A similar correlation of r = .62 was

found for 717 I.S.U. women.

When a regression equation based on the above data was used to predict GPA scores for the I.S.U. men in our sample, only 6 had compiled a GPA one standard error of estimate or more (.335) above their predicted level. These were indicated as over-achievers.

Five men had compiled GPA's that were at least one standard error of estimate below their predicted levels. These were called under-achievers.

As predicted, all of the 6 male over-achievers had lower PAS scores than all the 5 male under-achievers. This difference was significant at better than the .0025 level of confidence (Mann-Whitney U = 0).

When the PAS scores of I.S.U. women were treated in like fashion (Se = .441) no significant difference was found between the nine over-achievers and the eleven under-achievers (Mann-Whitney U = 37).

In the Geneseo sample of 53 students, SCAT scores were available for only 12 men and 30 women. Grade point averages were figured the same as in the I.S.U. sample.

A correlation of r = .24 had been found between the SCAT and GPA scores of 54 male Geneseo students not in the study. A similar correlation of r = .58 was found for 270 Geneseo women.

Predicted GPA's based on regression equations turned up only 2 men who could be classified as over-achievers (Se = .31) and two who qualified as under-achievers.

There were no tabled values for the Mann-Whitney statistic when M and N were both 2 so that a comparison of the PAS scores of over- and under-achieving males could not be made. There was, however, some overlap.

When the PAS scores of Geneseo women were treated in a similar fashion

(Se = .32), no significant difference was found between the three over-achievers and three under-achievers (Mann-Whitney U = 3).

Hypothesis 3. In order to eliminate the teacher variable, data for each instructor were analyzed separately. In the I.S.U. sample, a negative correlation of r = -.30 was found between the PAS and shift-toward-instructor (STI) scores of 18 men under a male instructor (See Table V, p. 26).

When the PAS and STI scores of 30 male I.S.U. students under a female instructor were compared, a coefficient of r = .21 was obtained. Neither relationship reached significance at the .05 level of confidence (t = 1.26; 1.13).

A comparison of the PAS and STI scores of I.S.U. women showed near zero relationships under both male and female instructors (r = -.01; r = -.08).

In the Geneseo sample, where both classes were taught by a male instructor, the comparison of the PAS and STI scores of 14 men yielded a coefficient of r = -.35. While this trend duplicated our findings in the I.S.U. sample, it failed to reach significance at the .05 level of confidence (t = 1.29).

A non-significant correlation of r = -.19 was computed between the PAS and STI scores of the 36 Geneseo women (t = 1.13).

Hypothesis 4. As predicted, a positive correlation (r = .22) was found between the PAS and MTAI scores of 61 male students in the I.S.U. sample. The relationship was significant at better than the .05 level of confidence (t = 1.78). No significant relationship was found for the 78 I.S.U. women, however (r = -.06; t = .616).

A similar trend appeared in the Geneseo sample when a correlation of r = .42 was computed between the PAS and MTAI scores of 15 men. This relationship just missed reaching significance at the .05 level of confidence (t = 1.67).

As in the I.S.U. sample, a near-zero relationship was found between the PAS and MTAI scores of 38 Geneseo women (r = -.04; t = .241).

Hypothesis 5. As predicted, a positive correlation (r = .24) was found between the SEAS and PAS scores of women in the I.S.U. sample. The relationship was significant at better than the .025 level of confidence (t = 2.16). A weak, non-significant coefficient was computed for I.S.U. men (r = .13; t = 1.01).

As in the I.S.U. sample, a positive relationship was found between the PAS and SEAS scores of 38 Geneseo women (r = .29). This coefficient was significant at better than the .05 level of confidence (t = 1.82).

The 15 Geneseo men produced data resulting in a near-zero correlation between their PAS and SEAS scores (r = -.06; t = .218).

Hypothesis 6. Near-zero correlations were computed between PAS and California F Scale (authoritarianism) scores for 61 I.S.U. men (r = -.07; t = .497), and 78 I.S.U. women (r = -.04; t = .329).

In the Geneseo sample, neither the coefficient for 15 men (r = -.24; t = .891) nor the one for 38 women (r = .19; t = 1.15) reached the .05 level of confidence.

Hypothesis 7. A negative correlation (r = -.23) was found between the PAS scores and the affiliation belief scores (SBRSaf) of 61 male I.S.U. students. This completely reversed our directional hypothesis, but the relationship was not significant under the Null Hypotheses (t = 1.87).

A similar analysis for 78 I.S.U. women showed no significant relationship between the PAS and SBRSaf scores (r = .03; t = .262).

A comparison of the SBRSaf and PAS scores of the 15 Geneseo men showed a similar, though non-significant trend toward a negative relationship (r = -.19; t = .700).

A near-zero coefficient was computed between the SBRSaf and PAS scores of 38 Geneseo women (r = .04; t = .241).

Hypothesis 8. When the PAS and SBRSac (achievement-oriented beliefs) acores of 61 I.S.U. men were compared, no significant relationship was found ($r = .12$; $t = .935$). A similar finding appeared for the 78 I.S.U. women ($r = .001$; $t = .009$).

In the Geneseo sample, a correlation of $r = .36$ was computed between the PAS and SBRSac scores of the 15 men. Although this is a strong trend opposing our predictions, it does not reach significance at the .05 level ($t = 1.39$).

A near-zero correlation was computed between the PAS and SBRSac scores of 38 Geneseo women ($r = -.03$; $t = .180$).

CONCLUSIONS AND IMPLICATIONS

One obvious and over-riding general conclusion concerns the venerable sex variable. Evidently, Ausubel's conception of "degree of personality satellization", when defined as "perception of parental acceptance and intrinsic valuation (PAS)", is predictive of male behavior, almost exclusively.

Perhaps society's bland acceptance of female dependency, coupled with its tacit insistence on male independence and responsibility, has attached much more meaning to differences in the parental acceptance of boys.

A second general conclusion concerns the striking similarity in the findings for the I.S.U. and Geneseo samples. Since these samples differed so sharply in both demographic and experiential variables, one begins to suspect that the results may be applicable to a much larger population than was first supposed.

Basic to most other findings was confirmation of the anxiety hypothesis. Men do manifest more anxiety as their satellization scores decrease. While this finding may not be startling in itself, its potency as a motivator of academic excellence in the University student bears sharp scrutiny.

Two findings give strong support for the probability that male college over-achievers have been motivated by the necessity to reduce the dissonance between a somewhat infantile, omnipotent ego structure and their performance in the real world. Since all male over-achievers had lower satellization scores than all male under-achievers IN The ISU Sample, the predicted difference was established. An additional finding which indicates no difference between the anxiety level of under and over-achieving males (Mann-Whitney U = 9.5) suggests that male incorporators may successfully use academic prowess to reduce the anxiety we could expect from their low satellization score. It should be added that the mean

anxiety scores of the normal achieving males was not significantly different from those of either under- or over-achievers.

The disparate findings concerning the attitudinal shift are perhaps the most intriguing. The strong, though non-significant, negative trends in all classes taught by male instructors calls into serious question one assumption basic to Ausubel's formula. It would appear that male satellizers are not more likely to identify with and imitate the attitudes of a male instructor. The trends, in fact, suggest the opposite.

Perhaps a prior error was our bland assumption that "parental acceptance" was a unitary construct. The appearance of a strong predicted trend in those classes taught by a female instructor suggests that for men "acceptance by mother" (or mother figures) may have a much different effect on attitudes toward public school children than "acceptance by father." Several other studies suggest this possibility (Barwick and Arbuckle, 1962; Teahan, 1963; Pierce, 1962).

The confirmation of our hypothesis relating satellization to positive attitudes toward children points up an anticipated irony. If lack of parental acceptance is simultaneously associated with academic over achievement and punitive attitudes toward children, then perhaps colleges of education should re-think their practice of selection of men students based solely on academic record.

Evidently, women satellizers have more favorable attitudes toward teacher education than their non-satellizing sisters. Perhaps our society's unequivocal acceptance of teaching as an occupation for women accounts for the emergence of this variable as the only one apparently relevant for female students.

Apparently, satellizers do not tend to be any more authoritarian than non-satellizers. This result was surprising since a negative correlation was found between the MTAT and the California F Scale in another study (Ofchus and

Gnagey, 1963).

Given the measuring devices used in this study, the theoretical similarity between satellization and affiliation seems not to be a real one. The trend, in fact, is to the contrary. Male students with higher satellization scores seem to score lower on affiliation-oriented beliefs.

A similar, though weaker, non-significant trend reverses our predicted similarity between "incorporation" and achievement-oriented beliefs.

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APPENDIX A

Tables

TABLE I

A DESCRIPTION BY SOURCE OF SOME PERSONAL AND EDUCATIONAL CHARACTERISTICS OF STUDENTS IN THE I.S.U. AND GENESEO SAMPLES

Source	Men		Women		Mean Age	Mean Ent. Score	Level of Preparation				School Classification									
							El. Ed.		Sec. Ed.		Fr.		Soph.		Jr.		Sr.		Grd.	
	N	%	N	%			N	%	N	%	N	%	N	%	N	%	N	%	N	%
I.S.U. Sample (N=139)	61	44	78	56	20	64	1	1	138	99	10	7	85	61	39	28	4	3	1	1
Geneseo Sample (N =53)	15	28	38	72	22	57	26	49	27	51	0	0	5	10	37	69	6	12	5	9

TABLE II

THE EXTENT OF FORMAL EDUCATION OF PARENTS OF STUDENTS IN THE I.S.U. AND GENESEO SAMPLES

	EXTENT OF FORMAL EDUCATION									
	Grade 8		Grades 9-11		H.S. Grad.		Some College		College Degree	
	N	%	N	%	N	%	N	%	N	%
I.S.U. Sample										
Mothers (131)	18	13	14	11	68	52	22	17	9	7
Fathers (129)	33	~~25~~ 26	15	~~11~~ 12	52	40	12	9	17	13
Geneseo Sample										
Mothers (57)	4	7	15	26	29	51	1	2	8	14
Fathers (56)	14	25	10	18	17	30	5	9	10	18

TABLE III

CLASSIFICATION OF OCCUPATIONAL LEVEL* OF PARENTS
OF STUDENTS IN I.S.U. AND GENESEO SAMPLES

	Housewife		Professional		Skilled		Semi-Skilled		Unskilled	
I.S.U. Sample	N	%	N	%	N	%	N	%	N	%
Mother (113)	62	54	37	32	9	7	1	1	4	3
Father (108)			52	48	41	37	10	9/10	5	4/5
Geneseo Sample										
Mother (56)	22	39	10	18	15	27	0	0	9	16
Father (54)			14	26	27	50	7	13	6	11

*All occupations were classified after the Dictionary of Occupational Titles, Volume I, Definitions of Titles, Second Edition, United States Government Printing Office, Washington, D. C., March, 1949.

TABLE IV

PRODUCT-MOMENT CORRELATIONS BETWEEN PAS (SATELLIZATION) SCORES AND MEASURES OF OTHER VARIABLES

Variable	Instrument	Men		Women	
		I.S.U. (N = 61)	Geneseo (N = 15)	I.S.U. (N = 78)	Geneseo (N = 38)
Anxiety	AT(MMPI)	-.29**	-.62***	.05	-.006
Attitude Toward Teaching Students	MTAI	.22*	.42	-.06	-.04
Attitude Toward Teacher Education	SEAS	.13	-.06	.24**	.29*
Authoritarianism	California F Scale	-.07	-.24	-.04	.19
Affiliation-Oriented Beliefs	SBRSaf	-.23	-.19	.03	.04
Achievement-Oriented Beliefs	SBRSach	.12	.36	.001	-.03

* = .05 level of confidence
** = .025 level of confidence
*** = .01 level of confidence

TABLE V

PRODUCT-MOMENT CORRELATIONS BETWEEN PAS SCORES (SATELLIZATION) AND MTAI SHIFT TOWARD THE INSTRUCTOR

	Male Students				Female Students			
	I.S.U.		Geneseo		I.S.U.		Geneseo	
	N	r	N	r	N	r	N	r
Female Instructor	30	.21			32	-.01		
Male Instructor	18	-.30	14	-.35	32	-.08	36	-.19

APPENDIX B

Forms

Student Name or I.D. Number

Name of College or University

Name of This Course Section

Date Age: Sex: M F

Married Single Major

Number of Education Courses Taken Previously

We are testing the validity and reliability of three new measuring devices. Although your performance on these scales will in no way affect your grade in this course, the results may enable colleges to teach students like yourself more efficiently. PLEASE BE AS ACCURATE AS YOU CAN.

OPEN THE BOOKLET AND BEGIN.

Name or ID Number

STUDENT EDUCATIONAL ATTITUDES SCALE

Directions: Read each statement below carefully to see whether or not you agree with it. Since all of these are a matter of opinion, there are really no right or wrong answers. Circle the number at the right of each statement to indicate how you feel about it.

5 indicates your strong agreement
4 means that you agree, but not strongly
3 indicates that you have no opinion about the statement
2 means that you disagree, but not strongly
1 indicates your strong disagreement

1. Instructors with a Doctor of Philosophy degree are better educated than those with a Doctor of Education degree..... 5 4 3 2 1
2. A subject-matter major should be required of all students preparing to teach in the elementary school..... 5 4 3 2 1
3. Courses in methods of teaching should be required of even the best scholars before they are allowed to teach..... 5 4 3 2 1
4. Subject-matter courses demand more of the intellect than do education courses..... 5 4 3 2 1
5. Education courses are extremely valuable for future teachers..... 5 4 3 2 1
6. Professors of Education should have the most to say about the preparation of teachers..... 5 4 3 2 1
7. The most important part of teacher preparation is obtaining a high degree of competence in one's subject-matter field..... 5 4 3 2 1
8. Teacher education institutions should reduce the number of required courses in education..... 5 4 3 2 1
9. The most learning occurs in courses that seem easy..... 5 4 3 2 1
10. Teacher education should be controlled by subject-matter specialists.. 5 4 3 2 1
11. More education courses should be required by colleges of education.... 5 4 3 2 1
12. The most important part of teacher preparation is gaining skill in methods of presentation..... 5 4 3 2 1
13. The more difficult a course is, the more you learn..... 5 4 3 2 1
14. Courses on how to teach are largely a waste of time..... 5 4 3 2 1
15. Education courses require more thinking than academic courses..... 5 4 3 2 1
16. Scholars who are competent in their subject-matter fields should be allowed to teach without courses in education..... 5 4 3 2 1
17. Education instructors are usually better educated then instructors in the subject-matter areas..... 5 4 3 2 1
18. Students preparing to teach in the elementary school should specialize in elementary methods instead of obtaining a subject-matter major..... 5 4 3 2 1

BEFORE YOU GO ON, BE SURE YOU HAVE CIRCLED AN ANSWER FOR <u>EVERY</u> ITEM ABOVE

Name or ID Number

STUDENT BELIEF RATING SCALE

Directions: Read each statement below carefully to see whether or not you agree with it. Since all of these are a matter of opinion, the only answer you should mark is your own personal belief. Circle the number at the right of each statement to indicate your belief about it.

5 indicates your strong agreement
4 means that you agree, but not strongly
3 indicates that you have no opinion
2 means that you disagree, but not strongly
1 indicates your strong disagreement

1. We live in an orderly universe..... 5 4 3 2 1
2. The best way to overcome a difficulty is to reason out a solution... 5 4 3 2 1
3. One should enjoy the pleasures of the moment fully and not be concerned about tomorrow..... 5 4 3 2 1
4. Everyone must prove his worth in life by what he accomplishes..... 5 4 3 2 1
5. All creation seems chaotic with very little natural order..... 5 4 3 2 1
6. One should trust his feeling or intuition about what to do in a difficult situation..... 5 4 3 2 1
7. An individual can solve a problem more effectively than can a group. 5 4 3 2 1
8. Whether a thing is right or wrong depends largely on the culture in which one lives..... 5 4 3 2 1
9. One must forego immediate pleasures in order to be happier in the future..... 5 4 3 2 1
10. Each person must depend on his conscience to determine what is right or wrong..... 5 4 3 2 1
11. Whether pleasant or unpleasant things happen to a person is largely a matter of luck and chance..... 5 4 3 2 1
12. A committee can usually solve a problem more effectively than a single person..... 5 4 3 2 1

BEFORE YOU GO ON, BE SURE YOU HAVE CIRCLED AN ANSWER FOR EVERY ITEM ABOVE

(Parent Attitude Rating Scale)

Name or ID Number

CHILDHOOD MEMORY CLARITY SCALE

Directions: When you read the following statements, try to think back to how you felt when you were a child growing up at home. The numbers at the right refer to the degree to which the description seems true of your own childhood. Respond to each statement by circling the correct number at its right.

5 = always true
4 = usually true
3 = sometimes true
2 = seldom true
1 = never true

1. No matter what happened, I felt that I could turn to my parents for help..... 5 4 3 2 1
2. My parents were nice to me, even when I did wrong..... 5 4 3 2 1
3. When I made a mistake, my parents said that it could have happened to anyone..... 5 4 3 2 1
4. My parents told the neighbors when I did something wrong..... 5 4 3 2 1
5. I know my parents loved me..... 5 4 3 2 1
6. My parents told me that something bad would happen to me if I didn't behave..... 5 4 3 2 1
7. My parents just didn't care what happened to me..... 5 4 3 2 1
8. My parents punished me even when I didn't do anything wrong..... 5 4 3 2 1
9. When I made a mistake, my parents got mad and yelled at me..... 5 4 3 2 1
10. I was scolded when I didn't pick up my toys..... 5 4 3 2 1
11. I couldn't tell my parents anything..... 5 4 3 2 1
12. My parents acted as if I were in their way..... 5 4 3 2 1
13. When I had something to say, my parents listened..... 5 4 3 2 1
14. My parents were interested in me..... 5 4 3 2 1
15. My parents didn't punish me for things I didn't do..... 5 4 3 2 1
16. When I was sick, my parents were worried and tried their best to make me well..... 5 4 3 2 1
17. My parents punished me more than I deserved to be..... 5 4 3 2 1
18. I could tell my parents about things that I did and they seemed to understand..... 5 4 3 2 1

BEFORE YOU GO ON, BE SURE YOU HAVE CIRCLED AN ANSWER FOR EVERY ITEM ABOVE

(Parent Attitude Rating Scale)

Name or ID Number

CHILDHOOD MEMORY CLARITY SCALE, p. 2

5 = always true
4 = usually true
3 = sometimes true
2 = seldom true
1 = never true

19. I was afraid my parents would stop loving me if I got bad marks.... 5 4 3 2 1

20. My parents wanted me to become whatever I wished to be..... 5 4 3 2 1

21. No matter how I did things, I knew my parents liked me..... 5 4 3 2 1

22. My parents wanted me to be somebody important when I grew up..... 5 4 3 2 1

23. I felt like doing something bad just to see if my parents would still love me..... 5 4 3 2 1

24. My parents didn't push me into things..... 5 4 3 2 1

25. My parents had already decided what I was going to be..... 5 4 3 2 1

26. As long as I did my best, my parents were satisfied even if other children did things lots better..... 5 4 3 2 1

27. My parents gave me special treats to get me to do things better.... 5 4 3 2 1

28. Somehow I knew that no matter what happened, my parents would always love me..... 5 4 3 2 1

29. As long as I did my best, my parents were satisfied..... 5 4 3 2 1

30. My parents nagged me to do things better..... 5 4 3 2 1

31. My parents were nicest to me when I was good in school..... 5 4 3 2 1

32. My parents felt that I was important, not what I did..... 5 4 3 2 1

33. My parents often talked about what I was going to be when I grew up..... 5 4 3 2 1

34. My parents liked to have me show off in front of company..... 5 4 3 2 1

35. My parents listened to what I had to say..... 5 4 3 2 1

36. My parents liked me as I was..... 5 4 3 2 1

BE SURE YOU HAVE CIRCLED AN ANSWER FOR <u>EVERY</u> ITEM ABOVE

STUDENT INFORMATION SHEET

1. Name _____ Age__ Class: Frosh.__ Soph.__ Jr.__ Sr.__

2. Marital Status: Single__ Married__ Number of Children__ Other_____

3. Mother's Occupation_____ Father's_____

4. Check the highest level of education completed by each of your parents:

Mother: 8th grade__ 9th-11th__ High School Grad.__ College__ Degree__ (what kind?)

Other post high school training?_____

Father: 8th grade__ 9th-11th__ High school Grad.__ College__ Degree__ (what kind)

Other post-high school training?_____

5. Which of the following represents your best guess as to your life situation in 8 or 9 years? (Check one of the following)

__Teaching and not married
__Teaching, married, no children.
__Teaching, married, children
__Not teaching and married
__Not teaching, married, no children
__Not teaching, married and children
__Not teaching and not married

6. If you plan to teach, check the items below that indicate the position for which you are training or.

__Elementary School Teacher
__Kdg. first or second grade
__3rd., 4th or 5th grade
__6th., 7th., or 8th grade
__High school teacher
_____Major subject
_____Minor subject

__Are you preparing for teaching exceptional children?

__Deaf or hard of hearing
__Physically handicapped
__Other?_____
__Blind or partially sighted
__Mentally retarded